

## CLAIMS

1. An incubator for culturing samples on culture containers inside a chamber adjusted to predetermined ambient conditions, the incubator being characterized in that a culture container accommodating rack having a plurality of culture container accommodating portions is disposed inside the chamber, a culture container transport device being adapted to move the culture container into or out of a desired culture container accommodating portion within the chamber 11, a camera being attached in the chamber 11 and facing a specified position wherein the culture container is to be photographed, the sample on the culture container being photographable by transporting the culture container to the specified position.

2. An incubator according to claim 1 wherein the specified position wherein the culture container is to be photographed is provided on a particular accommodating portion of the accommodating rack to make it possible to photograph the sample on the container accommodated into said accommodating portion.

3. An incubator according to claim 1 wherein the camera is attached to an output end of a camera drive mechanism, and is driven into the directions of two axes along a surface of the container.

4. An incubator according to claim 1 wherein a signal output end of the camera is connected to display means, and an image photographed by the camera is shown on the display means.

5 5. An incubator according to claim 1 wherein a signal output end of the camera is connected to an analyzer for performing a predetermined image processing and calculation processing for an image signal obtained from the camera to analyze the sample on the container.

10 6. An incubator for culturing samples on culture containers inside a chamber adjusted to predetermined ambient conditions, the incubator being characterized in that a microscopic observation unit is housed in the chamber, the microscopic observation unit having a microscopic observation  
15 device housed in a shield case with a closed construction, the shield case having an observation window disposed on a position opposed to a culture container accommodated in the chamber, the culture container being microscopic observable through the observation window by the microscopic observation  
20 device.

7. An incubator according to claim 6 wherein the microscopic observation unit comprises a drive device for moving the microscopic observation device, the drive device and the microscopic observation device being housed in the

shield case.

8. An incubator according to claim 6 wherein a culture container transport device for transporting the culture container, and stacker holders for arranging thereon stackers having a plurality of culture container accommodating racks are arranged inside the chamber, the microscopic observation unit having a contour wherein the observation unit can be disposed on the stacker holder in place of the one or a plurality of stackers.